

and floors. By using these spaces as horizontal air-flues, air may be easily conveyed under the floors to that side of the room which is opposite to the fire-place, where it may be allowed to enter the room through an opening made either in the floor or skirting (the latter is preferable), at which a sliding plate should be fixed, to regulate its quantity. The upper part of the shaft should have openings in its sides communicating with all the rooms, for vitiated air to escape at the side of the room opposite to that by which it enters. By these means a complete system of warmth and ventilation may be established through a long row of cottages; and if the plans were laid before commencing building, it could be executed at very small expense. The shafts and air-flues should be arranged by a judicious and experienced ventilator in such a way as to require scarcely any more materials than are required by existing plans of construction,—the main horizontal air-trunk and hot-chamber being the only additional items of builder's work. The power requisite for driving the air would be so little as scarcely to be felt by a large engine; and the heat in cold weather is obtainable, without cost, from the waste steam, by arrangements which have already been most successfully carried out."

"The method of ventilation by power is, unquestionably, the best that can be adopted, wherever there exists an engine for other purposes, or where the amount of ventilating duty to be performed is sufficient to justify the employment of a small one for that express purpose. Its effects are sure and infallible; any amount of air may be driven by it with certainty in any desired direction, and warmed, when the weather requires it, to any degree requisite for human comfort. The moderate cost at which steam-engines can now be supplied, is a material consideration in favour of ventilating by power. In some recent cases, a very simple form of direct acting engine has been applied to this special object with success and advantage."

A suggestion is offered whether better provision might not be made for carrying off smoke and vitiated air than has been usually attempted, and without great increase of cost. He suggests a square, round, or oblong chimney, large enough for all the smoke of a house to be carried up through its centre, where the walls intersect each other; or, in small tenements, in the centre of one side. "Let it be wholly or partially surrounded with ventilating flues of egress from the various rooms, and carried up, say eight or ten feet above the ridge. Let all the grates be of the register kind (or of the ordinary kind, furnished with a tightly-closing Wilson's chimney-valve), opened only when in use; and let their chimneys be carried up straight to within a foot of the cornices of their respective rooms, at which point let them each turn off, at an angle of 45°, upwards into the main chimney. Close under the cornice over the grate, fix an Arnott's valve or sliding regulator, leading into one of the egress ventilating flues: a door should be left at the bottom of the central main chimney, for cleaning. By this plan, which assimilates the chimney to that of a factory on a small scale, the ventilating flues will be rarefied by the waste heat of the fires; and if we suppose the kitchen to be in one of the lower rooms, this rarefaction will be constant. The divisions may be of stout sheet-iron, or of slate. The height given to the chimney and egress flues will; it is intended (the latter being rarefied on one side by the former, and assisted by proper ingress flues), ensure the draught of them all and that of the fires; and in buildings of superior class, that portion of the stack appearing above the roof, might be made a prominent ornamental feature, acceptable of the highest degree of architectural embellishment. In buildings of a lower class, it might be left comparatively plain, in which case it would still have a more respectable appearance than those heterogeneous assemblages of pipes, elbows, and chimney-pots, various in shape, upright, oblique, zig-zag, and askew, which now present a ridiculous contrast with noble architectural façades, and disgrace some of the best situations in the metropolis. The additional materials required would be small, and compensated by the beneficial results of freedom from smoke and improved ventilation."

"The writer suggests that earthenware tubes

might be used so as to give to each room a chimney and egress air-channel without occupying more space than at present. "The double tubes might be formed into easy curves while in the plastic stage of manufacture, so as to allow them to pass each other on the different floors. In a dwelling three stories high, for instance, consisting of six rooms, or two dwellings of three rooms each, the whole of the six chimney-tubes and ventilating flues may be carried up in one tubular stack: the tubes, as they proceeded upwards, would be firmly tied together and secured by the floors, and at the top, outside the building, might be held together by an iron hoop, concealed by an ornamental moulding. In the two lower stories, the egress-openings would not be in the centres of their respective chimney-breasts: but as they would each require a valve or sliding-plate with a frame of iron or brass, another and similar frame might be fixed at an equal distance on the other side of the centre line. The hollow spaces that would be left under the elbows should be filled in with brick-work, and the front and sides of the whole mass plastered, which completes the chimney-breast all the way up."

With respect to the "air-sphyon" Mr. Walker states that his experiments wholly disprove the opinions entertained by Dr. Chowne.

A Practical Treatise on Benefit Building Societies, &c. By WILLIAM STONE, Attorney-at-Law. Maxwell, Lincoln's Inn. 1851. This treatise embraces the whole subject of building societies,—their origin, constitution, and change of character, and the superiority of permanent over terminating societies; also the principles and practice of Tenure building companies, freehold land societies, &c., and the law relating to all these, together with the statutes and cases to the present time, and also rules, forms, and precedents of freehold, copyhold, and leasehold securities, with practical notes. On a subject of such deep importance to the working classes, therefore, this cannot but be a useful little work, more especially since it appears to have been written under an impression of the defective nature of terminating societies, so many of which have been based on fallacious principles, and have led to mischief and ruin in place of benefit. Our opinion on this subject, and also on the superiority of permanent associations discreetly established and conducted has been already repeatedly given, and need not be here further entered into. We shall only add, that Mr. Stone's book, as a mere compendium, is well worthy of attentive perusal by all who are interested in such institutions. To professional men, too, as an embodiment of the law and statutes relating to them, with rules, forms, and precedents of securities, as settled by counsel, it must be very useful. We are glad to see that the value of Mr. Scratchley's work, already reviewed (vol. viii. p. 92), in which he exposes the complicated errors such societies have laboured under, is prominently acknowledged by the author.

THE MELANCHOLY MEMOIR OF TOM TEE-SQUARE.

Tom Tee-square was an office boy.
Who sigh'd while great things *planning*;
White-faced, and needy, and slack;
Much giv'n to false hopes *fanning*.

His gov'nor, a designing man,
Cross-grain'd was, and cross-fisted;
Who, had Tom stol'n an idea from,
Would certainly have mis'd it.

Tom was not of those happy wights
Who Italy are sent to,
To sketch, get finish'd, and return
To talk 'bout *chinky-cheris*.

But oft when measuring back slims,
And making rueful faces,
He'd cause to exclaim, "Aix, my lines
Fall not in pleasant places."

Nor was he of your shabby sort,
Who seek to dine or luge out;
And yet, tho' blaming space, was he
Right often known to *sponge out*.

And oft would he himself confess,
Lugubriously gaily,
That, let him do his very best,
Still all he did was *scaly*.

(Tho' Tom he had a dog-leg'd stare,
And a knee were jogge-join'd,
And a nose was quite fore-shorten'd, yet
His jokes were ever pointed.)

Poor Tom was hardly half full yet,
He look'd his *stretching frame* was;
Hard fare you would have thought his board,
And lean, as Pecky's fame was.

No wonder his sad hopeless heart,
The bigger got, and tatter'd;
For Pecky proved himself each day,
A most unparallel'd *raiser*.

Tho' once, when in his native vale,
Plump as a mall-fed rat,
Soon he a competition won,
As a study from the *flat*.

So lathy he became at length
His friends did him amaze;
As the projecting shadow, who
Was near his vanishing point

Yet would Tom crack his joke at times,
"Mong happy chums with spouses;
And style himself high dramatist,
Since he could draw great houses."

He had some notions of his own,
Which might want overhauling;
As to the height of rates-pillars,
And strength of cast-iron walling.

At last Tom's elevation came:
Who ran Old Forky's knock about;
Nor need we e'en begrudge an claim
To subvert Tom's dismal fraction.

TETE DE LION.

Miscellaneous.

LIVERPOOL ARCHITECTURAL AND ARCHEOLOGICAL SOCIETY.—At the meeting of this society on the 8th instant Mr. Pictou, president, in the chair, Mr. Deacon, of St. Helens, who was to have contributed a paper on the subject of glass-blowing, being unavoidably absent, the society devoted the evening to the discussion of various subjects. Mr. Charles Reed produced the plans and designs of a hotel, to be called the Britannia Hotel, which he has been deputed to construct in the immediate vicinity of the Mersey Straits. Mr. Reed intimated that the hotel would contain 500 beds. Some notion of its extent may be judged of from the fact, that the front alone will be no less than 521 feet long. Mr. Reed, in order to gather hints for his designs, had visited the various large hotels on the continent, but habits and customs abroad were so entirely different from those in England, that his journey produced less valuable results than would at first appear. One feature in the design in its connection with the railway, to be accomplished by means of a glass avenue, à la Hyde-park Palace. A paper, supposed to have been written by Mr. Rickman, which had been forwarded by Mr. W. Mason, on the subject of Chester Cathedral, was read. Mr. Pictou offered some remarks on the architectural remains, &c., of the Winchester, Canterbury, and Salisbury Cathedrals and of churches in the county of Kent.

THE CAPITOL AT WASHINGTON.—A reader, with reference to our note that the Capitol at Washington is about to be increased, asks what sort of building it is. The following paragraph, from the New York Family Companion Almanac, will serve for an answer. "The Capitol at Washington is a large and showy building, of the Corinthian order of architecture, of freestone, and painted white. It is situated in the centre of a square, on an eminence 7½ feet above tide-water, and consists of a central edifice and two wings, the entire length being 352 feet, and the depth of the wings 121 feet. On the east front, there is a splendid portico of twenty-two columns, 36 feet high; and on the west front, a portico to ten columns. The height of the building, of the top of the dome, is 120 feet, and under the dome is the rotunda, 95 feet in diameter, and of the same height, adorned with sculpture and paintings of a national character. On the east front, in niches, are colossal figures, in marble, of Peace and War, and a fine marble statue of Columbus at the entrance. The colossal statue of Washington, by Greenough, stands in the east park, in a neat temple erected for the purpose. Within the building are the hall of the House of Representatives, the Senate Chamber, the library of Congress, the court-room of the Supreme Court, and some seventy rooms for the accommodation of committees, &c. &c. Around the Capitol are 22 acres of park, highly ornamented with trees, shrubbery, fountains, &c."